



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,181	03/16/2001	Toshiya Satoh	503.39864X00	5733

20457 7590 12/05/2001

ANTONELLI TERRY STOUT AND KRAUS  
SUITE 1800  
1300 NORTH SEVENTEENTH STREET  
ARLINGTON, VA 22209

EXAMINER

DIAZ, JOSE R

ART UNIT PAPER NUMBER

2815

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/809,181

Applicant(s)

SATOH ET AL.

Examiner

José R. Diaz

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 11-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Election/Restrictions***

➤ Applicant's election without traverse of Group I in Paper No. 7 is acknowledged.

### ***Priority***

➤ Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

➤ The listing of references in the specification (e.g. JP 10-92865 on page 5) is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

➤ The drawings are objected to because the description of the layer that is between the layers 3 and 1 is missing. Correction is required.

### ***Specification***

➤ The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

➤ The disclosure is objected to because of the following informalities: the term "devicees" should be changed to --devices--. Furthermore, the phrase "pp. 38-64" in

line 2 of page 4 should be changed to --pp. 40-64 -- as disclosed by Applicant on the IDS filed on Paper No. 8.

Appropriate correction is required.

***Claim Objections***

- Claims 4 and 10 are objected to under 37 CFR 1.75(c) as being in improper form. See MPEP § 608.01(n).
- Claims 2-3 and 6-9 are objected to because of the following informalities: the term "player" should be changed to --layer--. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

- Claims 1-3 and 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yukawa (US Patent No. 6,320,267 B1).

Regarding claims 1 and 5, Yukawa teaches a device (see cols 1-12) comprising: an integrated circuit (14), an electrode pad (16), a stress cushioning layer (20), a lead wire (26), external electrodes (24), a conductor protective layer (32) and a conductor portion (consider portion underneath of the ball-shaped terminals 24) (see Figure 1). Furthermore, Yukawa teaches a semiconductor element protective layer (12, 18) (see Figure 1).

Regarding claims 2 and 6, Yukawa teaches that said end face of said conductor protective layer is formed inside said end face of said stress cushioning layer (for example, consider the left end of the stress cushioning layer 20 of the left portion of the device which is comprised of layers 18, 20, 22 and 30 in Figure 1).

Regarding claims 3 and 7, Yukawa teaches that said end face of said conductor protective layer is formed outside said end face of said stress cushioning layer (for example, consider the right end of the stress cushioning layer 20 of the left portion of the device which is comprised of layers 18, 20, 22 and 30 in Figure 1).

Regarding claim 8, Yukawa teaches that said end face of said conductor protective layer (12) is formed outside said end face of said stress cushioning layer (see Figure 1).

Regarding claim 9, Yukawa teaches that said end face of said conductor protective layer (18) is formed inside said end face of said stress cushioning layer (see Figure 1).

### ***Claim Rejections - 35 USC § 103***

➤ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

➤ Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yukawa (US Patent No. 6,320,267 B1) in view of Johnson (US Patent No. 5,888,849).

Regarding claims 4 and 10, Yukawa does not teach tapering the end of the stress cushioning layer. However, Johnson teaches that is well known in the art to taper the end of the stress cushioning layer (see col. 3, lines 17-20). Therefore, it would have been obvious to one having ordinary skill in the art at the same time the invention was made to modify Yukawa to include the step of tapering the end of the stress cushioning layer. The ordinary artisan would have been motivated to modify Yukawa in the manner described above for at least the purpose of facilitating removal from the mold.

### ***Conclusion***

➤ The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito et al. (US Pat. No. 6,258,631 B1) disclose a semiconductor package (see Figure 1). Ikemizu et al. (US Pat. No. 6,097,085) disclose a semiconductor package mounted on a motherboard (see Figure 1).

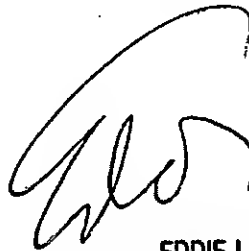
***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José R. Díaz whose telephone number is (703) 308-6078. The examiner can normally be reached on 8:00 - 5:00 Monday through Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JRD  
November 27, 2001



EDDIE LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800